

Amendments to the Claims:

The following listing of claims will replace all prior versions and listings of claims in the application:

1. (previously amended) An isolated nucleic acid consisting essentially of (a) a nucleotide sequence encoding a polypeptide comprising the amino acid sequence of SEQ ID NO:2 or 11; and (b) the complement of the nucleotide sequence of (a).

2-10. (cancelled)

11. (withdrawn)

12. (cancelled)

13-19. (withdrawn)

20. (cancelled)

21-29. (withdrawn)

30. (cancelled)

31. (previously added): A vector comprising the isolated nucleic acid of claim 1.

32. (previously amended): An isolated cell containing the nucleic acid of claim 1 or the vector of claim 31.

33. (currently amended) An isolated nucleic acid comprising the nucleotide sequence of a complementary DNA which hybridizes under high stringency conditions to substantially the entire complement of a second nucleic acid encoding amino acids 1 to 1473 of SEQ ID NO:11, wherein said high stringency conditions comprise hybridizing in 5X Denhardt's solution, 5X SSPE and 0.2% sodium dodecylsulfate at 42°C, followed by washing in 0.1X SSPE and 0.1% Sodium dodecylsulfate at 65°C, and wherein said nucleotide sequence of said complementary DNA encodes a polypeptide that binds specifically an antibody, said antibody binds specifically to a DS-CAM comprising the amino acid sequence of SEQ ID NO: 11.

34. (currently amended): An isolated nucleic acid comprising the nucleotide sequence of a complementary DNA that hybridizes under high stringency conditions to substantially the entire complement of a second nucleic acid consisting of the nucleotide sequence of a fragment of SEQ ID NO:1 that encodes amino acids 24 to 126 of SEQ ID NO:2 and that hybridizes under high stringency conditions to substantially the entire complement of a third

nucleic acid consisting of the nucleotide sequence of a fragment of SEQ ID NO:1 that encodes amino acids 1087 to 1185 of SEQ ID NO:2, wherein said high stringency conditions comprise hybridizing in 5X Denhardt's solution, 5X SSPE and 0.2% sodium dodecylsulfate at 42°C, followed by washing in 0.1X SSPE and 0.1% Sodium dodecylsulfate at 65°C, and wherein said nucleotide sequence of said complementary DNA encodes a polypeptide that binds specifically an antibody, said antibody binds specifically to a DS-CAM comprising the amino acid sequence of SEQ ID NO: 2.

35. (currently amended): An isolated nucleic acid comprising the nucleotide sequence of a complementary DNA which hybridizes under high stringency conditions to substantially the entire complement of a second nucleic acid consisting of the nucleotide sequence set forth in SEQ ID NO:7 or SEQ ID NO:8, wherein said high stringency conditions comprise hybridizing in 5X Denhardt's solution, 5X SSPE and 0.2% sodium dodecylsulfate at 42°C, followed by washing in 0.1X SSPE and 0.1% Sodium dodecylsulfate at 65°C, and wherein said nucleotide sequence of said complementary DNA encodes a polypeptide that binds specifically an antibody, said antibody binds specifically to a DS-CAM comprising the amino acid sequence of SEQ ID NO: 7 or 8.

36. (previously added): A vector comprising the isolated nucleic acid of claim 33, 34, or 35.

37. (previously added): An isolated cell containing the nucleic acid of claim 33, 34, or 35.

38. (currently amended): An isolated nucleic acid ~~comprising~~ consisting of the nucleotide sequence of a complementary DNA which encodes a polypeptide comprising at least one of the amino acid sequences selected from the group consisting of: amino acids 1-23, 24-126, 127-225, 226-316, 317-409, 410-506, 507-603, 604-697, 698-792, 793-887, 888-983, 984-1086, 1087-1185, 1186-1281, 1282-1375, 1376-1471, 1472-1594, 1595-1616, and 1617-1910 of SEQ ID NO:2.

39. (previously added): A vector comprising the isolated nucleic acid of claim 38.

40. (previously amended): An isolated cell containing the nucleic acid of claim 38 or the vector of claim 39.

41. (currently amended): An isolated nucleic acid molecule ~~comprising~~ consisting of the nucleotide sequence set forth in SEQ ID NO:1, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, nucleotides 453-6185 of SEQ ID NO:1 or nucleotides 453-5168 of SEQ ID NO:10.

42. (previously added): A vector comprising the isolated nucleic acid of claim 41.

43. (previously amended): An isolated cell containing the nucleic acid of claim 41 or the vector of claim 42.

44. (currently amended): An oligonucleotide ~~comprising~~ consisting of at least ~~15~~ 50 nucleotides of (a) a nucleotide sequence that encodes amino acids 1 to 1473 of SEQ ID NO:11; (b) the nucleotide sequence set forth in SEQ ID NO: 7 or 8; or (c) the complement of the nucleotide sequence of (a) or (b).

45. (previously added): The oligonucleotide of claim 44 wherein the oligonucleotide sequence consists essentially of SEQ ID NO:5 or SEQ ID NO:6.

46. (previously added): A kit for detecting the presence of a nucleic acid in a sample comprising in a package at least one oligonucleotide of claims 44 or 45.

47. (canceled):

48. (currently amended) The isolated nucleic acid of claim 1, ~~33, 34, 35, 38~~ or 41 which is RNA.

49. (previously added): A method for making of a Down Syndrome-Cell Adhesion Molecule polypeptide or fragment thereof, said method comprising the steps of culturing the cell of claim 32, 37, 40 or 43 under conditions suitable for expression of said Down Syndrome-Cell Adhesion Molecule protein, and isolating the expressed Down Syndrome-Cell Adhesion Molecule protein.